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Bulletin 69 January, 1900

NEW HAMPSHIRE COLLEGE

AGRICULTURAL EXPERIMENT STATION

THE INSPECTION OF FERTILIZERS

IN 1899

IN CO-OPERATION WITH THE STATE BOARD OF AGRICULTURE

NEW HAMPSHIRE COLLEGE
OF
AGRICULTURE AND THE MECHANIC ARTS
DURHAM

NEW HAMPSHIRE COLLEGE

OF

AGRICULTURE AND THE MECHANIC ARTS

AGRICULTURAL EXPERIMENT STATION

DURHAM, N. H.

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FERTILIZERS

TRADE VALUES OF FERTILIZING INGREDIENTS IN RAW MATERIALS AND CHEMICALS, 1899.

	Cents per lb.
Nitrogen in ammonia salts	15.0
" nitrates	12.5
" dry and fine ground fish, meat, and blood, and in high grade mixed fertilizers	14.0
" in cotton-seed meal, linseed meal, and castor-pomace	12.0
" fine ground bone and tankage	14.0
" medium ground bone and tankage	10.0
Phosphoric acid soluble in water	4.5
" " soluble in ammonium citrate (reverted)	4.0
" " in fine ground bone and tankage	4.0
" " in medium ground bone and tankage	4.0
" " in fine ground fish, cotton-seed meal, linseed meal, castor-pomace, and wood ashes	4.0
" " insoluble in mixed fertilizers	2.0
Potash as sulphate free from chlorides and in wood ashes	5.0
" " muriate	4.25

The above values are based on the wholesale market price for the materials, when sold in large lots at the principal trade centers in New England. The valuation of a ton of any mixed fertilizer based on the above figures will usually fall ten dollars below the retail price at the local agency. This varia-

tion includes such fixed charges as cost of mixing, bags, cartage and freight, salaries and commissions of agents, and interest.

THE FERTILIZER INSPECTION IN 1899.

This year, as in the past, the New Hampshire College Agricultural Experiment Station has co-operated with the state board of agriculture in an inspection of the commercial fertilizers sold in the state.

In accordance with the public statutes, the collection of samples of the different fertilizers has been in charge of the secretary of the board of agriculture, Hon. N. J. Bachelder, who has been assisted by Mr. H. E. Barnard; while the chemical analyses have been performed under the direction of the chemist of the experiment station, Prof. Fred W. Morse, who has had for assistants, Dr. E. W. Lazell, and Messrs. Arthur Given and Harry E. Barnard.

The work of the inspectors in this state cannot be finished before the farmers buy their season's stock of fertilizers, because the manufacturers do not, in many cases, place their goods in the hands of the local agents until April 1, or later. Consequently the analyses of the past year must serve as a guide to the composition of the fertilizers on the market for the coming year. The publication of this bulletin has therefore been delayed, with the idea that it will receive more attention now than if issued last fall, and thus be more effective in decreasing the use of inferior brands.

Under the present fertilizer law a manufacturer pays a license fee, which permits the sale of as many different brands of fertilizers as he may choose to place on the market. The multiplication of brands by the different makers has required more analyses than could be paid for out of the license fees, therefore several of the samples collected were not analyzed.

The list of brands not analyzed is published in order that all brands found by the agent of the board of agriculture may be included in this report, and that their guarantees may be compared by those farmers who may wish to select a fertilizer on the basis of its percentage composition.

The agent of the board of agriculture visited twenty-eight different towns representing all sections of the state. He collected, from eighty-seven agencies, two hundred and thirty-three samples of fertilizers, representing one hundred and twenty-eight different brands of goods and twenty-six manufacturers. The towns visited were as follows:

Portsmouth, Epping, Newton, Hollis, Nashua, Merrimack, Wilton, Hancock, Hillsborough Bridge, Hillsborough Upper Village, Keene, Walpole, Claremont, Goshen, Unity, Newport, Manchester, Derry, Laconia, Tilton, Franklin Falls, Lebanon, Woodsville, Lancaster, Colebrook, Conway, Wolfeborough, and Rochester.

The manufacturers, brands, and analytical results are given in the following tables:

COMPOSITION OF MIXED FERTILIZERS COLLECTED BY THE STATE BOARD OF AGRICULTURE, 1899.

Number.	Manufacturer and Brand.	Nitrogen in 100 lbs.		Phosphoric Acid in 100 lbs.							Potash in 100 lbs.	
							Total.		Available.			
		Found.	Guaranteed.	Soluble.	Reverted.	Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.
	Acme Fertilizer Co.											
1	Acme Fertilizer No. I	3.42	*3.70*	5.30	3.45	0.65	9.40	*9.00*	8.75	*8.00*	9.12	*9.00*
2	Acme Fertilizer No. II	4.51	*4.94*	7.85	3.60	0.95	12.40	*9.00*	11.45	*8.00*	5.33	*5.00*
3	Acme E. Special	2.71	*2.47*	7.15	2.65	1.00	10.80	.....	9.80	*10.00*	3.95	*1.50*
5	Special Superphosphate	2.12	*1.23*	2.35	4.92	3.70	10.97	*8.50*	7.27	*7.50*	3.29	*2.00*
	Armour Fertilizer Works.											
6	Armour's All Soluble	2.89	*2.88*	1.75	10.38	1.25	13.38	.....	12.13	*2.00*	6.33	*4.00*
7	Armour's Bone and Potash	2.71	*2.47*	4.05	3.25	4.70	12.00	.....	7.30	*4.00*	2.18	*2.00*
8	Armour's Grain Grower	1.72	*1.65*	5.20	3.40	3.30	11.90	.....	8.60	*4.00*	2.61	*2.00*
	Baugh & Sons Co.											
9	General Crop Grower	1.10	*0.83*	4.60	3.60	2.85	11.05	.....	8.20	*8.00*	1.23	*1.00*
	Bowker Fertilizer Co.											
11	Bowker's Bone and Wood Ash Fertilizer	1.83	*1.50*	0.20	6.80	4.65	11.65	*8.00*	7.00	*6.00*	2.91	*2.00*
12	Bowker's Corn Phosphate	1.50	*1.50*	5.15	3.60	1.65	10.40	*10.00*	8.75	*8.00*	2.47	*2.00*
13	Bowker's Early Potato Manure	3.03	*3.00*	5.30	3.96	0.95	10.21	*8.00*	9.26	*7.00*	7.26	*7.00*
14	Bowker's Farm and Garden Phosphate	1.75	*1.50*	3.40	4.55	3.00	10.95	*11.00*	7.95	*9.00*	2.51	*2.00*
15	Bowker's High Grade Fertilizer	2.21	*2.25*	2.10	5.38	2.20	9.68	*10.00*	7.48	*8.00*	4.08	*4.00*
17	Bowker's Lawn and Garden Dressing	3.50	*3.00*	1.55	7.00	2.15	10.70	*8.00*	8.55	*6.00*	4.74	*5.00*
18	Bowker's Potash Bone	0.84	*0.75*	1.50	5.85	1.65	9.00	*8.00*	7.35	*6.00*	2.33	*2.00*

19	Bowker's Potato and Vegetable Phosphate	1.55	*1.50*	2.10	7.65	1.25	11.00	*11.00*	9.75	*9.00*	2.25	*2.00*
20	Bowker's 6 per cent Potato Fertilizer	1.00	*0.75*	2.05	7.30	1.45	10.80	*9.00*	9.35	*7.00*	5.80	*6.00*
21	Bowker's Square Brand Bone and Potash	1.62	*1.50*	1.55	8.20	2.95	12.70	*12.00*	9.75	*6.00*	2.22	*2.00*
22	Bowker's Superphosphate with Potash	.....	.....	0.85	9.51	3.85	14.21	*12.00*	10.36	*10.00*	1.01	*1.00*
23	Bowker's Sure Crop Bone Phosphate	1.08	*0.75*	3.80	6.25	1.40	11.45	*11.00*	10.05	*9.00*	2.24	*2.00*
24	Stockbridge Manure for Celery	4.10	*4.12*	4.10	3.12	2.80	10.02	*5.00*	7.22	*4.00*	6.75	*5.50*
25	Stockbridge Manure for Corn	2.90	*3.00*	6.25	2.85	1.90	11.00	*10.00*	9.10	*7.00*	7.54	*7.00*
27	Stockbridge Manure for Onions	4.17	*4.50*	3.75	3.00	3.65	10.40	*8.00*	6.75	*6.00*	6.32	*5.00*
28	Stockbridge Manure for Potatoes and Vegetables	3.17	*3.20*	5.60	2.16	1.65	9.41	*8.00*	7.76	*6.00*	10.36	*10.00*
29	Stockbridge Manure for Seeding Down	2.52	*2.25*	4.85	3.47	3.00	11.32	*10.00*	8.32	*6.00*	9.67	*10.00*
30	Stockbridge Manure for Strawberries and Small Fruits	2.40	*2.25*	7.70	2.41	1.80	11.91	*7.00*	10.11	*6.00*	3.95	*4.00*
	BRADLEY FERTILIZER CO.											
31	Bradley's Corn Phosphate	2.15	*2.06*	4.60	3.93	3.20	11.73	*10.00*	8.53	*9.00*	1.76	*1.50*
32	Bradley's Eclipse Phosphate for All Crops	1.30	*1.00*	5.45	3.90	3.15	12.50	*12.00*	9.35	*10.00*	1.97	*1.50*
34	Bradley's Potato Manure	2.90	*2.00*	3.05	2.95	3.65	9.65	*8.00*	6.00	*6.00*	5.89	*5.00*
35	Bradley's XL Superphosphate	2.26	*2.50*	7.45	2.55	1.90	11.95	*11.00*	10.05	*9.00*	2.26	*2.00*
37	Complete Manure for Top-Dressing Grass and Grain	3.89	*4.95*	3.20	2.20	1.60	7.00	*6.00*	5.40	*5.00*	3.72	*2.50*
38	Bradley's Complete Manure with 10 per cent Potash	2.69	*3.30*	6.15	1.40	2.00	9.55	*7.00*	7.55	*6.00*	10.43	*10.00*
	CLARK'S COVE FERTILIZER CO.											
39	Bay State Fertilizer	2.00	*1.85*	5.25	3.25	2.90	11.40	*10.00*	8.50	*8.50*	1.81	*2.00*
40	Potato Fertilizer	2.12	*2.00*	5.60	2.47	3.45	11.52	*9.00*	8.07	*8.00*	3.24	*3.00*
	CLEVELAND DRYER CO.											
41	Cleveland Potato Phosphate	2.05	*2.05*	7.70	1.15	2.80	11.65	*10.00*	8.85	*8.00*	3.12	*3.00*
	CROCKER FERTILIZER CO.											
43	Crocker's Ammoniated Corn Phosphate	2.23	*2.00*	7.15	2.74	1.55	11.44	*11.00*	9.89	*10.00*	1.61	*1.60*
44	New Rival Ammoniated Superphosphate	1.38	*1.23*	6.85	2.90	1.85	11.60	*11.00*	9.75	*10.00*	1.58	*1.60*
46	Crocker's Superior Fertilizer	1.01	*0.82*	4.55	3.25	1.90	9.70	*9.00*	7.80	*8.00*	2.39	*2.00*
	CUMBERLAND BONE PHOSPHATE CO.											
47	Cumberland Concentrated Phosphate	2.88	*3.30*	5.35	3.25	1.90	10.50	*10.00*	8.60	*8.00*	6.20	*7.00*
49	Cumberland Superphosphate	2.12	*2.06*	5.90	2.85	2.75	11.50	*10.00*	8.75	*8.00*	1.91	*2.00*

COMPOSITION OF MIXED FERTILIZERS COLLECTED BY THE STATE BOARD OF AGRICULTURE, 1899.—*Continued.*

Number.	Manufacturer and Brand.	Nitrogen in 100 lbs.		Phosphoric Acid in 100 lbs.							Potash in 100 lbs.	
							Total.		Available.			
		Found.	Guaranteed.	Soluble.	Reverted.	Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.
	E. Frank Coe Co.											
51	Columbian Corn Fertilizer	1.51	*1.00*	7.75	2.10	3.15	13.00	*11.00*	9.85	*9.00*	2.12	*1.85*
52	Columbian Corn Fertilizer	1.46	*1.20*	7.05	2.15	2.65	11.85	*10.50*	9.20	*8.50*	2.47	*2.50*
53	Columbian Potato Fertilizer	1.22	*1.00*	6.60	2.00	3.00	11.60	*11.00*	8.60	*9.00*	2.76	*1.85*
54	Columbian Potato Fertilizer	1.25	*1.20*	6.80	2.05	3.25	12.10	*10.50*	8.85	*8.50*	2.57	*2.50*
55	High Grade Ammoniated Bone Superphosphate	2.00	*1.85*	8.55	1.45	2.20	12.20	*13.00*	10.00	*9.00*	2.32	*2.25*
56	Prize Brand Grain and Grass	.....	.....	7.80	3.20	1.75	12.75	*12.00*	11.00	*10.50*	2.46	*2.00*
57	Red Brand Excelsior Guano for Market Gardening	3.59	*3.50*	8.50	0.15	1.85	10.50	*10.00*	8.65	*9.00*	5.84	*6.00*
58	XXV Ammoniated Bone Superphosphate	0.91	*0.80*	6.20	2.00	3.10	11.30	*9.00*	8.20	*8.00*	1.79	*1.50*
	L. B. Darling Fertilizer Co.											
59	Farm Favorite	2.24	*2.06*	6.50	2.55	1.15	10.20	*8.00*	9.05	*7.00*	6.14	*5.00*
	Great Eastern Fertilizer Co.											
61	General Fertilizer	0.79	*0.82*	2.40	6.12	3.10	11.62	*9.00*	8.52	*8.00*	4.41	*4.00*
62	Grass and Oats Fertilizer	.....	.....	6.65	4.65	3.50	14.80	.....	11.30	*11.00*	2.13	*2.00*
64	Potato Manure	2.10	*2.06*	2.60	5.80	1.60	10.00	*9.00*	8.40	*8.00*	4.47	*4.00*
	Lister Agricultural Chemical Works.											
66	Lister's Success	1.37	*1.24*	6.70	2.90	2.55	12.15	*11.50*	9.60	*9.50*	1.86	*2.00*

	LOWELL FERTILIZER CO.										
70	Swift's Lowell Lawn Dressing	3.91	*4.11*	6.75	1.50	1.55	9.80	*8.00*	8.25	*7.00*	5.26	*5.00*
71	Swift's Lowell Potato Phosphate	2.78	*2.47*	6.90	1.05	1.75	9.70	*9.00*	7.95	*8.00*	6.22	*6.00*
72	Swift's Lowell Tobacco Manure	4.70	*4.94*	5.10	1.85	0.75	7.70	*7.00*	6.95	*6.00*	7.64	*8.00*
	MAPES FORMULA CO.										
73	Mapes's Average Soil Complete Manure	3.84	*4.12*	4.65	2.50	1.25	8.40	*8.00*	7.15	*7.00*	6.03	*5.00*
76	Mapes's Vegetable Manure or Complete Manure for Light Soils	4.64	*4.94*	2.60	4.00	2.55	9.15	*8.00*	6.60	*6.00*	7.48	*6.00*
	PACIFIC GUANO CO.										
77	Nobsque Guano for all Crops	1.10	*1.15*	5.95	1.95	2.60	10.45	*9.00*	7.85	*8.00*	2.53	*2.00*
79	Soluble Pacific Guano	1.89	*2.25*	5.05	3.40	2.90	11.35	*10.50*	8.45	*8.50*	2.10	*2.00*
	PACKER'S UNION FERTILIZER CO.										
80	High Grade Animal Corn Fertilizer	2.35	*2.47*	5.90	2.55	1.80	10.25	*9.00*	8.45	*8.00*	2.16	*2.00*
81	High Grade Gardener's Complete Manure	2.95	*2.47*	6.90	1.44	1.25	9.59	*10.00*	8.34	*8.00*	10.30	*10.00*
82	High Grade Potato Manure	2.26	*2.06*	5.45	2.95	1.35	9.70	*9.00*	8.35	*8.00*	6.85	*6.00*
83	High Grade Universal Fertilizer	0.99	*.82*	6.65	2.05	1.90	10.60	*9.00*	8.70	*8.00*	4.88	*5.00*
	PARMENTER & POLSEY FERTILIZER CO.										
85	A. A. Brand	4.10	*4.53*	4.55	2.95	1.05	8.55	*8.00*	7.50	*7.00*	8.54	*8.00*
86	Dissolved Bone and Potash	1.46	*1.44*	2.50	10.99	5.05	18.54	*15.00*	13.49	*12.00*	5.91	*3.00*
88	Special Potato Fertilizer	3.01	*3.29*	5.40	3.45	1.30	10.15	*9.00*	8.85	*8.00*	7.71	*7.00*
90	Strawberry Fertilizer	2.29	*2.47*	4.35	2.95	1.80	9.10	*10.00*	7.30	*9.00*	6.30	*6.00*
128	P. & P. Potato Fertilizer	1.98	*1.64*	3.45	3.55	1.20	8.20	*7.00*	7.00	*6.00*	6.40	*5.50*
	QUINNIPIAC CO.										
91	Quinnipiac Corn Manure	1.98	*2.06*	6.15	2.55	2.70	11.40	*10.10*	8.70	*9.00*	1.05	*1.50*
92	Quinnipiac Phosphate	2.54	*2.47*	5.45	3.40	2.55	11.40	*10.00*	8.85	*9.00*	1.95	*2.00*
93	Quinnipiac Potato Manure	2.26	*2.47*	3.25	2.75	2.90	8.90	*7.00*	6.00	*6.00*	5.38	*5.00*
	READ FERTILIZER CO.										
96	Read's Potato Manure	2.42	*2.50*	7.20	1.05	1.25	9.50	*8.00*	8.25	*7.00*	10.03	*10.00*
97	Practical Potato Special	2.64	*.83*	2.80	2.05	1.20	6.05	*5.00*	4.85	*4.00*	8.20	*8.00*
98	Standard Superphosphate	1.32	*.83*	7.05	1.85	1.95	10.85	*9.00*	8.90	*8.00*	3.85	*4.00*
99	Vegetable and Vine Fertilizer	1.81	*1.65*	4.35	1.40	2.00	7.75	*7.00*	5.75	*6.00*	7.67	*8.00*

COMPOSITION OF MIXED FERTILIZERS COLLECTED BY THE STATE BOARD OF AGRICULTURE, 1899.—*Continued.*

Number.	Manufacturer and Brand.	Nitrogen in 100 lbs.		Phosphoric Acid in 100 lbs.							Potash in in 100 lbs.	
							Total.		Available.			
		Found.	Guaranteed.	Soluble.	Reverted.	Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.
	Russia Cement Co.											
102	Essex Corn Fertilizer	2.19	*2.00*	2.50	6.00	4.40	12.90	*11.00*	8.50	*9.00*	3.39	*3.00*
103	Essex Potato Fertilizer	2.55	*2.00*	3.10	5.90	4.00	13.00	*11.00*	9.00	*9.00*	6.01	*5.00*
104	Essex XXX Fish and Potash	2.29	*2.10*	5.70	4.65	4.85	15.20	*12.00*	10.35	*10.00*	2.80	*2.25*
	Standard Fertilizer Co.											
105	Standard Fertilizer	1.79	*2.00*	4.60	4.10	4.25	12.95	*10.00*	8.70	*8.00*	2.14	*2.00*
	Henry F. Tucker Co.											
107	Tucker's Imperial Bone Superphosphate for all Crops	1.90	*1.25*	7.90	1.25	2.40	11.55	*11.00*	9.15	*9.00*	2.35	*1.85*
108	Tucker's Original Bay State Bone Superphosphate	1.63	*2.06*	5.80	2.75	3.00	11.55	*11.00*	8.55	*9.00*	2.72	*2.00*
109	Tucker's Special Potato Fertilizer	2.49	*2.06*	4.10	3.20	3.05	10.35	*9.00*	7.30	*8.00*	6.28	*6.00*
	Walker, Stratman & Co.											
110	Welcome Brand Fourfold Fertilizer	1.72	*0.83*	7.45	1.23	1.60	10.28	*11.00*	8.68	*8.00*	2.08	*1.00*
111	Welcome Brand Potato Special Fertilizer	2.18	*1.65*	4.25	1.65	2.90	8.80	*13.00*	5.90	*9.00*	9.12	*5.00*
	Williams & Clark Fertilizer Co.											
112	Americus Ammoniated Bone Superphosphate	2.17	*2.47*	4.05	3.25	3.80	11.10	*10.00*	7.30	*9.00*	2.36	*2.00*

COMPOSITION OF FERTILIZERS COLLECTED BY THE STATE BOARD OF AGRICULTURE, 1899.

Number.	Manufacturer and Brand.	Nitrogen in 100 lbs.		Phosphoric Acid in 100 lbs.							Potash in 100 lbs.	
							Total.		Available.			
		Found.	Guaranteed.	Soluble.	Reverted.	Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.
	Acme Fertilizer Co.											
116	Pure Ground Bone	5.11	*3.29*	.....	.....	13.80	21.60	*18.00*	7.80	.....	.....	.....
	Bowker Fertilizer Co.											
117	Bowker's Fresh Ground Bone	3.62	*2.25*	.....	.....	17.65	25.00	*22.00*	7.35	*5.00*	.....	.....
	Lowell Fertilizer Co.											
118	Swift's Lowell Ground Bone	2.90	*2.47*	.....	.....	19.40	28.50	*23.00*	9.10	*5.00*	.....	.....
	Parmenter & Polsey Fertilizer Co.											
119	Pure Ground Bone	2.42	*2.00*	.....	.....	13.15	22.20	*16.00*	9.05	*6.00*	.....	.....
	Read Fertilizer Co.											
120	Pure Ground Bone	1.94	*2.06*	.....	.....	22.05	30.20	*22.00*	8.15	.....	.....	.....
	Great Eastern Fertilizer Co.											
121	Dissolved Bone	.....	.....	9.05	5.83	1.25	16.13	.....	14.88	*11.00*	.....	.....

COMPOSITION OF FERTILIZERS COLLECTED BY THE STATE BOARD OF AGRICULTURE, 1899.—*Continued.*

Number.	Manufacturer and Brand.	Nitrogen in 100 lbs.		Phosphoric Acid in 100 lbs.							Potash in 100 lbs.	
							Total.		Available.			
		Found.	Guaranteed.	Soluble.	Reverted.	Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.
	Bowker Fertilizer Co.											
122	Kainit	.....	.....	.....	.....	.....	.....	.....	.....	.....	12.59	*12.00*
	Lowell Fertilizer Co.											
123	Swift's Kainit	.....	.....	.....	.....	.....	.....	.....	.....	.....	12.38	.....
	Parmenter & Polsey Fertilizer Co.											
124	Muriate of Potash	.....	.....	.....	.....	.....	.....	.....	.....	.....	49.60	*50.00*
125	Superphosphate of Lime	.....	.....	13.50	2.40	0.55	16.45	.....	15.90	*17.00*	.....	.....
	Manchester Slaughtering and Rendering Co.											
126	Tankage	7.45	.....	.....	.....	9.65	17.50	.....	7.85	.....	.....	.....

BRANDS OF FERTILIZERS SAMPLED BUT NOT ANALYZED.

Manufacturer and Brand.	Guarantee in 100 lbs.			
	Nitrogen.	Phosphoric Acid.		Potash.
		Total.	Available.	
Acme Fertilizer Co.				
Acme Potato Special No. 2	3.29	7.00	5.00	9.00
Baugh & Sons Co.				
Twenty-Five Dollar Phosphate	2.06	.....	7.00	.50
Bowker Fertilizer Co.				
Bowker's Hill and Drill Phosphate	2.25	12.00	9.00	2.00
Stockbridge Manure for Corn, Grain, and Fodder Corn	3.00	10.00	7.00	6.00
Bradley Fertilizer Co.				
Bradley's Potato Fertilizer	2.06	11.00	9.00	3.25
Complete Manure for Potatoes and Vegetables.	3.50	9.00	8.00	7.00
Cleveland Dryer Co.				
Cleveland Superphosphate	2.05	11.00	9.00	2.00
Crocker Fertilizer Co.				
Potato, Hop, and Tobacco Phosphate	2.00	11.00	10.00	3.25
Cumberland Bone Phosphate Co.				
Potato Fertilizer	2.00	11.00	9.00	3.00
E. Frank Coe Co.				
Celebrated Special Potato Fertilizer	1.65	10.00	8.00	4.00
L. B. Darling Fertilizer Co.				
New Hampshire Special	3.00	10.00	8.00	8.00
Great Eastern Fertilizer Co.				
Northern Corn Special	2.85	9.00	8.00	2.00
Lister's Agricultural Chemical W'ks.				
Special Potato	1.65	9.00	8.00	3.00
Lowell Fertilizer Co.				
Swift's Lowell Animal Brand for all Crops	2.46	10.00	9.00	4.00
Swift's Lowell Bone Fertilizer for Corn and Grain	1.65	9.00	8.00	3.00
Swift's Lowell Dissolved Bone and Potash	1.65	10.00	9.00	2.00

BRANDS OF FERTILIZERS SAMPLED BUT NOT ANALYZED.—
Continued.

Manufacturer and Brand.	Guarantee in 100 lbs.			
	Nitrogen.	Phosphoric Acid.		Potash.
		Total.	Available.	
Mapes Formula Co.				
Mapes's Manure for Corn	2.47	10.00	8.00	6.00
Mapes's Manure for Potatoes	3.71	8.00	.....	6.00
Pacific Guano Co.				
Potato Special	2.06	9.00	8.00	3.00
Packer's Union Fertilizer Co.				
Wheat, Oats, and Clover Fertilizer	.....	.....	11.00	2.00
Parmenter & Polsey Fertilizer Co.				
Plymouth Rock Brand Fertilizer	2.47	9.00	8.00	4.00
Star Brand Superphosphate	1.64	8.00	7.00	2.50
Quinnipiac Co.				
Quinnipiac Potato Phosphate	2.05	9.00	8.00	3.00
Read Fertilizer Co.				
Farmers' Friend Superphosphate	2.00	10.00	9.00	2.00
Sampson Fertilizer	1.65	7.00	6.00	4.00
Russia Cement Co.				
Essex Complete Manure for Corn, Grain, and Grass	3.70	9.50	7.00	9.50
Essex Complete Manure for Potatoes, Roots, and Vegetables	3.70	9.00	7.00	8.50
Standard Fertilizer Co.				
Standard Special for Potatoes	2.05	9.00	8.00	3.00
Williams & Clark Fertilizer Co.				
Americus Corn Phosphate	2.06	10.00	9.00	1.50
Americus Potato Manure	2.06	9.00	8.00	3.00
Prolific Crop Producer	0.82	7.00	6.00	1.00

FRED W. MORSE,
Vice-Director and Chemist.